SCOPUS

NORTHWARD SPRING PASSAGE OF PALAEARCTIC PASSERINES ACROSS TSAVO

D.J. Pearson

There is ample evidence of heavy southward Palaearctic movement through the bushlands of southeast and east central Kenya during November and December. The great majority of the world's Marsh Warblers[1], Sprossers and River Warblers, together with most of the Whitethroats bound for southern Africa, and Iranias, Rufous Bush Chats, Red-tailed Shrikes and Barred Warblers bound for northeastern Tanzania, pass on a narrow front east of Mts Kenya and Kilimanjaro each autumn. This movement is much in evidence from Isiolo and Meru, south through Ukambani to Tsavo and the Taita Hills area, and has been studied extensively at Ngulia (see, for example, Pearson & Backhurst 1976a). Far less is known, however, about corresponding spring return movements. Thus, although Whitethroats are often common in April around Nairobi (Pearson & Backhurst 1976b), they are observed only in small numbers at this time in and around Tsavo (P.C. Lack, pers. comm., author's observations). Numbers of spring Marsh Warblers and Sprossers recorded in eastern Kenya have also been small, and there were a mere four Kenyan spring records of the River Warbler up to 1979.

Since they are very rarely recorded further west in spring, it has been assumed that the species characteristic of the eastern Kenyan autumn movement return northwards by approximately the same route. However, they clearly have little tendency to come to ground and pause on migration at this time of year, as they do for example around Tsavo during December. Indeed, the only migrant passerines regularly observed in these bushlands during April appear to be the Red-backed Shrike, the Lesser Grey Shrike *Lanius minor* and the Willow Warbler. The misty conditions and late night rain which attract falls of birds to Ngulia Lodge rarely occur there during April, and for many years spring visits added little information on overhead migration. Observations during April 1977 (Britton & Britton 1977) demonstrated a heavy movement of Whitethroats. More recently, falls at the Lodge during April 1980 provided evidence of a northward migration of considerable magnitude and variety.

SPRING OBSERVATIONS AT NGULIA, 1971-1979

In all, the Lodge was manned on 27 spring days over this period, on dates ranging from 31 March to 29 April, by D.E.G. & G.C. Backhurst, H.A. & P.L. Britton or the author. Most of the nights concerned were mist free, and often windy, with any rain confined to the evening, and the hours before dawn completely clear.

The few spring birds caught up to 1976 comprised mainly Whitethroats, Marsh Warblers, Willow Warblers and Sedge Warblers, the last of these a species rarely encountered in autumn. The only productive period was 24-26 April 1973, when 184 migrants were ringed. These were not, however, grounded

[1] Scientific names of most species mentioned in the text are given in Table 1.

under typical Lodge conditions. Nights were clear, and migrants were on this occasion unusually abundant in the Ngulia Hills generally. The main species were the four mentioned above, but the catch also included several Red-backed Shrikes and Great Reed Warblers, a single Sprosser and a single River Warbler.

On 13 April 1977, a major fall was witnessed at the Lodge for the first time, not in mist, but with heavy storms at night and around dawn (Britton & Britton 1977). Thousands of birds, predominantly Whitethroats, were grounded, with smaller numbers of Sprossers, Willow Warblers and Red-backed Shrikes, but surprisingly few Marsh Warblers. Many of these birds were very fat. The same year, on the moonless night of 22 April, when unfortunately no ringer was present, a member of the Lodge staff, J.M. Muema, noted thick mist and drizzle, and it was of considerable interest that he reported finding dead birds, probably Whitethroats, in the building next morning. On 8 April 1978, showers between dusk and midnight brought tens of birds, Whitethroat identifiable amongst them, into view above the lights, but the sky cleared, and although a River Warbler was caught, practically no migrants remained at dawn.

THE FALLS OF APRIL 1980

During 1980, the effects of low mist and showers on a moonless April night were finally witnessed in detail. Rain early in the month was confined to afternoon and evening. Conditions were unusually warm and humid, and there was no sign then, or indeed later in the month, of the strong southeast breeze usual in April. To judge from local reports, light mist probably occurred on 12th, and certainly did so on 13th. The author arrived at the Lodge at 09:30 on 13th, and found migrants still present in the nearby bush, which included at least 20 Sedge Warblers, 5 Whitethroats, 3 Great Reed Warblers and 2 Marsh Warblers, species not noted earlier that morning either in Tsavo West or at Voi.

The Lodge was visited again by the author on 16-18 April. The early hours of 16th, with a new moon, produced a very large fall. Complete cloud cover descended to ground level between 01:00 and 02:30; it lifted slightly, but was rarely above 5 m before dawn. There was one 10 min shower around 03:30. Birds were moving continuously in the bushes behind the lights, and a single 20 m net operated for 3 h caught 230 migrants. There were well over 1000 birds in the bush next morning, and 120 were netted. Again, the main species involved were Whitethroat, Sedge Warbler and Marsh Warbler. There were a few Sprossers, while River Warblers (15 caught), Great Reed Warblers (16), Red-backed Shrikes (21) and a single Olive-tree Warbler were particularly noteworthy. There appeared to be little movement of Ethiopian species. The occasional Harlequin Quail *Coturnix delegorguei* was seen, and a single Button Quail *Turnix sylvatica* was found dead. A Dwarf Bittern *Ixobrychus sturmii* and a Madagascar Squacco Heron *Ardeola idae* were present near the Lodge after dawn.

The conditions encountered on this day were precisely those which so often produce large falls during late autumn. Numbers seen were rather lower than would have been expected during peak southward passage, however, with fewer birds immediately outside the buildings. This was understandable as birds were presumably attracted down to the glow of the Lodge as they approached high over the ridge from the south. Approaching birds are perhaps flying lower in autumn, and must be influenced by the powerful beams of the north-facing lights.

The night of 17 April was clear, and no migrants were seen, although a few warblers were netted after dawn. On 18th, cloud descended to ground level for a single hour, then lifted and partially cleared from 02:00. Only a few warblers were netted at night, but 24 Swallows were caught from a flock of about 200 which circled the lights for an hour. A further 28 migrants caught

at dawn were evidence of a small fall. Sedge Warblers, Whitethroats and Marsh Warblers were again the main species on 17-18 April. Two more River Warblers were caught, and one was singing after dawn on 18th. Further visits to the Lodge on 23-24 April and (by H.A. & P.L. Britton) on 28-29 April met with clear nights and very few remaining warblers.

TABLE 1

Percentage composition of the catch at Ngulia, 16-18 April 1980, compared with percentage contributions of the same species to the overall 1969-79 autumn catch

	16-18 Apr 1980	Oct-Feb 1969-79
	%	%
Whitethroat *Sylvia communis*	30.2	29.5
Sedge Warbler *Acrocephalus schoenobaenus*	23.0	0.1
Marsh Warbler *Acrocephalus palustris*	10.7	33.3
Eurasian Swallow *Hirundo rustica*	8.1	0.2
Red-backed Shrike *Lanius collurio*	5.7	1.3
Willow Warbler *Phylloscopus trochilus*	4.8	1.7
River Warbler *Locustella fluviatilis*	4.0	3.7
Great Reed Warbler *Acrocephalus arundinaceus*	3.8	<0.05
Sprosser *Luscinia luscinia*	3.6	19.1
Reed Warbler *Acrocephalus scirpaceus*	1.2	0.1
Upcher's Warbler *Hippolais languida*	0.7	0.4
Garden Warbler *Sylvia borin*	0.5	1.9
Spotted Flycatcher *Muscicapa striata*	0.5	0.8
Olive-tree Warbler *Hippolais olivetorum*	0.2	0.5
Barred Warbler *Sylvia nisoria*	0.2	0.9
Red-tailed Shrike *Lanius isabellinus*	0.2	1.1
Irania *Irania gutturalis*	0.2	2.1
Total catch (birds)	420	44 868

The complete species composition of the catch of 16-18 April is shown by percentage in Table 1 above. Figures are compared with percentages contributed by the same species to the overall 1969-79 autumn catch. The prominent contributions of the Sedge Warbler and, to a lesser extent, the Great Reed Warbler, were striking features of the April movement. It was surprising, since a number were present in the Park at this time, that not a single Lesser Grey Shrike was caught or seen at night. The Sprosser, the Barred Warbler, the Red-tailed Shrike and the Irania were relatively scarce in mid April, whilst two regular autumn species, the Rufous Bush Chat *Cercotrichas galactotes* and the Basra Reed Warbler *Acrocephalus griseldis*, were not recorded. Of the migrants caught on 16 April, 205 were weighed and examined for visible fat. A few grounded birds were very fat: a Sprosser at 36.5 g, a Willow Warbler at 12.6 g, a Garden Warbler at 24.7 g, a Sedge Warbler at 16.5 g, and Whitethroats at 19.6, 19.3 and 17.6 g. However, 85 per cent of those examined carried surprisingly low reserves, being rated *1-2* (see Pearson & Backhurst 1976a).

DISCUSSION

The species encountered at Ngulia in mid April 1980 were similar to those in most earlier small catches at the same time of year, the only exception being

the storm-grounded, Whitethroat-dominated fall of 1977. It seems clear that, although normally little in evidence, a very heavy April movement does occur across Tsavo. This involves the four principal autumn migrants, the Whitethroat, the Sprosser, the Marsh Warbler and the River Warbler. It also prominently features other species, notably the Sedge Warbler, the Great Reed Warbler, the Willow Warbler and the Red-backed Shrike, which use the eastern Kenyan route to a much greater extent in spring than in autumn (Jackson 1938, Pearson & Backhurst 1976b, unpublished records of G.C. Backhurst, P.L. Britton, P.C. Lack, and the author). It should be noted that prior to 1980, the return of the River Warbler *via* the Tsavo region was mainly a matter of conjecture.

Autumn passerine migration has not been recorded in strength more than about 30 km east of Voi, and certainly does not reach the coastal strip (P.L. Britton pers. comm.). The April falls at Ngulia, however, may be representative of a broader front eastern Kenyan return movement. Species such as the Marsh Warbler, Sprosser, Sedge Warbler, and even Whitethroat, appear regularly on the caost during April, together with Red-backed Shrikes, and are occasionally locally numerous (unpublished observations of P.L. & H.A. Britton and the author). Red-backed Shrikes are normally common in the bushland between Maungu and Mariakani, and the author noted Marsh Warblers to be widespread also in this area after rain in mid April 1980.

The relatively low weights of the majority of Ngulia birds in April 1980 were perhaps surprising, particularly in view of the many high weights recorded after the storm of April 1977. In autumn, fatter birds have generally been more associated with heavy rain than with typical misty conditions, suggesting that they are normally less prone to be grounded (Backhurst & Pearson 1977); presumably the same applies in spring. In any case, it is clear from their limited reserves that many birds overflying Tsavo in spring must make a landfall within a few hundred kilometres, presumably in the Ethiopian highlands.

Several of the species characteristic of Ngulia autumn falls have been absent or almost so in mid April, and presumably migrate northwards a week or two earlier, as perhaps do the majority of the Sprossers. A more complete understanding of spring movements across Tsavo must await such time as visits to the Lodge coincide with appropriate conditions in late March - early April, and again at the end of April and beginning of May

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D.J. Pearson, Department of Biochemistry, Box 30197, Nairobi.

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